

Amendments to the Specification

Please replace the paragraph beginning at page 7, line 21, with the following rewritten paragraph:

-- To vary the rate of interphase loading, the form of the input is changed. The desired input signal is generated using a stored in memory means 46 and the generated signal 32 is stored in memory of waveform generator 38. The stored signal 32 is used as an input signal to drive piezoelectric actuator 14 via power amplifier 40. During a test, a diamond tip 50 (as shown in Fig. 7), attached to piezoelectric stack assembly 14, is positioned at the center of selected fiber 52 using an x-y-z positioning system, video microscope 16, and specimen monitor 18. Once the contact is made between the diamond tip 50 and fiber 52, the system is triggered using the triggering function of waveform generator 38 to send input to piezoelectric actuator 14. Piezoelectric stack assembly 14 provides a load F to the interphase of fiber/matrix composite 11. As shown in Fig. & 7, load F causes a fiber 52 to detach from a matrix 54 of fiber/matrix composite 11, and to eventually be pushed out from matrix 54. Displacement of diamond tip 50 and change in load F is continuously monitored during the test using high frequency data acquisition system 24.--

Please replace the Abstract of the Disclosure with the following paragraph:

-- The present invention comprises a dynamic interphase-loading apparatus and method for testing the interfacial shear strength, stress-strain response, energy absorbing capability and durability of an interphase region of a fiber/matrix composite under quasi-static to high strain rates. The apparatus provides a load to the fiber/matrix interphase under high loading rates. The apparatus includes means for continuously monitoring the load applied to the fiber/matrix composite and providing a signal representative thereof, and means for monitoring the displacement of the

Application No. 09/528,379
Amendment dated June 12, 2003
Reply to Office Action of March 13, 2003

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interphase of the fiber/matrix interphase and providing a signal representative thereof. The apparatus further includes a computer that receives the load signal and the displacement signal, and generates information representing the mechanical properties of the interphase of the fiber/matrix composite.--
